

## **REMARKS**

This amendment is filed in response to the Office Action mailed September 15, 2005. A petition for a three month extension of time to reply under 35 U.S.C. §1136(a) accompanies this amendment. This reply is therefore timely.

Claims 1-27 are currently pending. The Examiner rejected claims 16, 18, and 24-27 under 35 U.S.C. § 112, second paragraph for indefiniteness. The Examiner rejected claims 1-12, 14, 19, and 24-27 under 35 U.S.C. §102(a) as being anticipated by Russian patent 2,205,478 ("Lomovskaja et al."). The Examiner rejected claim 23 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,754,143 ("Warnagiris et al."). The Examiner rejected claim 13 under 35 U.S.C. §103(a) as being obvious over Lomovskaja et al. in light of U.S. Patent No. 6,061,025 ("Jackson"). The Examiner rejected claims 15-17 under 35 U.S.C. §103(a) as being obvious over Lomovskaja et al. in light of U.S. Patent No. 6,753,816 ("Apostolos"). The Examiner rejected claims 20 and 21 under 35 U.S.C. §103(a) as being obvious over Lomovskaja et al. in light of U.S. Patent No. 6,404,394 ("Hill"). The Examiner rejected claim 22 under 35 U.S.C. §103(a) as being obvious over Lomovskaja et al. in light of Warnagiris et al. These rejections will be addressed in turn.

The Examiner indicated that claim 18 is allowable if rewritten in independent form. For the reasons set forth below, the applicants believe that the claims from which claim 18 depends are allowable; therefore, the applicants believe that claim 18 is allowable as written.

## **1. Section 112 Rejections**

The Examiner rejected claims 16 and 18 for indefiniteness for using the term “obround”. This term is defined on page 6 of the specification as “racetrack shaped” is illustrated in figure 2. The applicants therefore believe that the term is not indefinite.

The Examiner rejected claims 24-27 for using the term “the radio frequency performance of a standard quarter wave isotropic antenna”. Reference is made throughout the specification to quarter wave isotropic antennas and their radio frequency performance. For example, see page 13 of the specification (especially the chart set forth thereon). The applicants therefore believe that the term is not indefinite.

## **2. Section 102 Rejections**

### **A. Lomovskaja et al.**

The Examiner rejected claims 1-12, 14, 19, and 24-27 as anticipated by Lomovskaja et al. Lomovskaja et al. is a Russian language reference for which only an English language abstract was provided by the Examiner. Under Manual of Patent Examining Procedure §706.02:

Citation of and reliance upon an abstract without citation of and reliance upon the underlying scientific document is generally inappropriate where both the abstract and the underlying document are prior art.... If the document is in a language other than English and the examiner seeks to rely on that document, a translation must be obtained so that the record is clear as to the precise facts the examiner is relying upon in support of the rejection. The record must also be clear as to whether the examiner is relying upon the abstract or the full text document to support a rejection. The rationale for this is several-fold.... [T]he full text document [can] include teachings away from the invention that will preclude [a] ... rejection ... when the abstract alone appears to support the rejection.

It is extremely difficult to determine from the brief abstract what Lomovskaja et al. is disclosing; a fuller description might provide insight into the terminology used by Lomovskaja et al. and other details of the construction and functioning of Lomovskaja et al.'s invention. Accordingly, any use of Lomovskaja et al. without the provision of a full translation by the Examiner is improper.

The applicants will address the Examiner's rejections to the best of their ability based on their understanding of the abstract of Lomovskaja et al., without waiving their objection to the use of Lomovskaja et al. in any form without the provision of a full translation to the applicants.

With respect to claim 2, Lomovskaja et al. appears to teach the inclusion of an unknown amount of dielectric material (Fig. 1, Ref. No. 6). Therefore, it appears that Lomovskaja et al. does not teach or suggest an antenna that "comprises substantially no dielectric material."

With respect to claim 3, Lomovskaja et al. appears to teach the inclusion of a shorting device (Fig. 1, Ref. No. 6). The applicants cannot determine from figure 1 of Lomovskaja et al. whether the shorting device consists of dielectric material, whether any dielectric material utilized in Lomovskaja et al. has any maximum percentage weight, and if so, whether that percentage weight is one half of one percent, one percent, two percent, five percent, etc. The applicants further cannot determine the percentage weight of any dielectric utilized in figure 1 of Lomovskaja et al. Therefore, it appears that Lomovskaja et al. does not teach or suggest an antenna that "comprises no more than one percent (1%) dielectric material by weight."

With respect to claim 4, Lomovskaja et al. does not disclose that the “planar conductor comprises at least one metal.”

With respect to claim 5, Lomovskaja et al. does not disclose (a) that the planar conductor comprises at least one metal and (b) the percentage weights of the components of the planar conductor. Therefore, Lomovskaja et al. does not disclose or suggest that “the antenna comprises at least ninety-nine percent (99%) metal by weight .“

With respect to claim 6, Lomovskaja et al. does not disclose (a) that the planar conductor comprises at least one metal and (b) the percentage weights of the components of the planar conductor. Therefore, Lomovskaja et al. does not disclose or suggest that “the antenna comprises at least ninety-five percent (95%) metal by weight .“

With respect to claim 7, Lomovskaja et al. does not disclose or suggest a planar meander. Rather it discloses three monopoles, two of which can be connected together by a movable shorting device. Unlike a meander, there is no path from one end to the other, from Ref. No. 5<sub>1</sub> to 5<sub>3</sub> or vice versa. Accordingly, Lomovskaja et al. does not disclose or suggest an “antenna further compris[ing] a planar meander”.

With respect to claim 8, Lomovskaja et al. does not disclose or suggest what substance should be utilized as a shorting device (Fig. 1, Ref. No. 6). Accordingly, Lomovskaja et al. does not disclose or suggest “dielectric material attached to said planar conductor.”

With respect to claim 9, Lomovskaja et al. does not disclose or suggest what substance should be utilized should be utilized as a shorting device (Fig. 1, Ref. No. 6). Accordingly, Lomovskaja et al. does not disclose or suggest “dielectric material compris[ing] a conductive polymer.”

With respect to claim 10, as discussed above, Lomovskaja et al. does not disclose or suggest either a planar meander or dielectric material. Hence, Lomovskaja et al. does not disclose or suggest the “dielectric material short[ing] out a portion of said planar meander.

With respect to claim 11, Lomovskaja et al. does not disclose or suggest dielectric material. Hence, Lomovskaja et al. does not disclose or suggest the “dielectric material form[ing] a tuning device for the antenna.”

With respect to claim 12, Lomovskaja et al. does not disclose or suggest dielectric material. Hence, Lomovskaja et al. does not disclose or suggest the “dielectric material form[ing] a device for matching impedance of the antenna to a device other than the antenna.”

With respect to claim 24, Lomovskaja et al. does not disclose or suggest an antenna “wherein the antenna is no more than eight tenths of an inch (0.8”) in height; and wherein the radio frequency performance of the antenna at 2.440 gigahertz (GHz) is within three decibels (3db) of the radio frequency performance of a standard quarter wave isotropic antenna”. Lomovskaja et al. does not specify the maximum size of an antenna nor does it correlate antenna size with performance.

With respect to claim 25, Lomovskaja et al. does not disclose or suggest an antenna “wherein the radio frequency performance of the antenna at 2.440 gigahertz (GHz) is within two decibels (2db) of the radio frequency performance of a standard quarter wave isotropic antenna”. Lomovskaja et al. does not specify the maximum size of an antenna nor does it correlate antenna size with performance.

With respect to claim 26, Lomovskaja et al. does not disclose or suggest an antenna “wherein the radio frequency performance of the antenna at 2.440 gigahertz (GHz) is within one decibel (1db) of the radio frequency performance of a standard

quarter wave isotropic antenna”. Lomovskaja et al. does not specify the maximum size of an antenna nor does it correlate antenna size with performance.

With respect to claim 27, Lomovskaja et al. does not disclose or suggest an antenna “wherein the antenna is no more than one half of an inch (1/2”) in height”. Lomovskaja et al. does not specify the maximum size of an antenna.

#### **B. Warnagiris**

With respect to claim 23, Warnagiris does not disclose or suggest that the “radiating pattern of the antenna is substantially isotropic”. While the Examiner argues that Warnagiris discloses all of the structural limitations of claim 23, the above limitation is an additional limitation over and above the enumerated structural limitations of claim 23. Some antennas may meet the structural limitations of claim 23, but fail to meet the additional limitation of a substantially isotropic radiating pattern. Claim 23 does not read on any antenna that does not possess a substantially isotropic radiating pattern even if it possesses the structural limitations of claim 23. An antenna might not possess a substantially isotropic radiating pattern despite being generally cylindrical if, to give just one example, the distribution of conducting material by weight were substantially non-symmetrical. Thus, the failure of Warnagiris to disclose that the “radiating pattern of the antenna is substantially isotropic” is critical.

### **III. Section 103 Rejections**

#### **A. Lomovskaja et al. in light of Jackson et al.**

As discussed above, the applicants object to the use of Lomovskaja et al.

**B. Lomovskaja et al. in light of Apostolos**

As discussed above, the applicants object to the use of Lomovskaja et al. With respect to claim 15, the applicants recognize that the use of secondary planar conductors is known in the art. The applicants submit, however, that

an antenna comprising a planar conductor,

wherein said planar conductor is self-supporting; and

wherein the radiating pattern of the antenna is substantially isotropic, and

further comprising a secondary planar conductor attached to said planar conductor is not known in the art. The applicants further submit that proof of the former is not proof of the latter.

The Examiner further argues that it would have been obvious to have used a secondary planar structure to have obtained the desired radiation pattern. This argument utilizes impermissible hindsight reasoning. One can always argue that it would have been obvious to have used a component used by the applicant to have obtained the desired result. A showing of obviousness requires more. It requires the identification of a specific reference demonstrating that one of ordinary skill in the art at the time would have been motivated to have used the component for a specific reason. Neither Lomovskaja et al. nor Apostolos discloses or suggests “a secondary planar conductor attached to said planar conductor.”

With respect to claim 16, neither Lomovskaja et al. nor Apostolos discloses or suggests a “planar conductor compris[ing] a planar meander; and wherein said secondary planar conductor comprises a planar obround structure.”

With respect to claim 17, neither Lomovskaja et al. nor Apostolos discloses or suggests a “planar conductor compris[ing] a planar meander; and wherein said secondary planar conductor comprises a planar round structure.”

**C. Lomovskaja et al. in light of Hill**

As discussed above, the applicants object to the use of Lomovskaja et al.

**D. Lomovskaja et al. in light of Warnagiris et al.**

As discussed above, the applicants object to the use of Lomovskaja et al. With respect to claim 22, Warnagiris et al. does not disclose or suggest that the “planar conductor is malleable”.

For the reasons set forth above, the applicants believe that claims 1-27 are allowable over the prior art of record and request that a timely Notice of Allowance be issued.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read 'Ethan Civan', written over a horizontal line.

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